



# UPSC CURRENT AFFAIRS MCQS 09-01-2024

## Question.1

Consider the following with respect to 'Alternative Investment Funds (AIFs)'

1. AIFs primarily invest in traditional assets like stocks and bonds.
2. AIFs offer the potential for higher returns, but also involve higher risks.
3. AIFs are regulated by the Reserve Bank of India (RBI).

Select the correct statement(s)

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 2 only
- (d) 1 and 2 only

## Solution (c)

AIFs are designed to invest in non-traditional assets like private equity, venture capital, hedge funds, and real estate. They are not limited to stocks and bonds like traditional mutual funds, hence statement 1 is incorrect. AIFs can offer potentially higher returns due to their diverse investment options and flexibility.

However, this comes with higher risks compared to traditional investments, hence statement 2 is correct.

Category I: Invests in start-ups, early-stage ventures, SMEs, etc. Includes venture capital funds, angel funds, etc.

Category II: Includes funds not in Category I/III, like real estate funds, debt funds, etc. No leverage or borrowing except for operational requirements.

Category III: Employs complex trading strategies, may use leverage. Includes hedge funds, PIPE Funds, etc.

AIFs are regulated by the Securities and Exchange Board of India (SEBI) in India, providing a structured framework for their operation and management, hence statement 3 is incorrect.

## Question.2

With reference to 'Gross Domestic Product (GDP)', consider the following statements

1. Statement 1- Nominal GDP represents the total market value of goods and services produced within a nation's borders, using the current prices.
2. Statement 2-Real GDP, in contrast, adjusts nominal GDP for inflation by using a base year as a reference point.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement II is not the correct explanation for Statement-I
- (c) Statement-I is correct but statement II is incorrect
- (d) Statement -I is incorrect but Statement -II is correct

### Solution (a)

About Gross Domestic Product (GDP)

**Gross Domestic Product (GDP)** is the cornerstone of measuring a nation's economic output. It represents the total market value of all final goods and services produced within a country's borders in a given timeframe.

### Nominal GDP:

It captures the market value of current prices. So, if a loaf of bread costs \$1 this year and \$2 next year, nominal GDP will reflect that as a growth of 100%, even though the actual amount of bread produced might be the same.

It's easy to calculate as it simply adds up the market value of all goods and services produced.

However, it can be misleading due to inflation. Rising prices can create the illusion of economic growth when it's just the cost of things going up, not the actual quantity of goods and services increasing.



### Real GDP:

It adjusts nominal GDP for inflation, providing a more accurate picture of economic growth or decline.

It uses a base year as a reference point, calculating the value of all goods and services produced in that year as if they were priced at current prices.

This allows for a fairer comparison of economic performance over time, eliminating the distorting effect of inflation.

However, it's more complex to calculate, requiring additional data and statistical analysis.

Context: India's GDP is projected to grow by 7.3% in the financial year 2023-24, as per the First Advance Estimates (FAEs) released by the government..

### Question.3

**With reference to 'Seismic zones of India' consider the following statements**

1. Zone II has the lowest probability of experiencing strong earthquakes compared to other zones.
2. More than 80% of the land mass of India is prone to earthquakes of different intensities.

**Select the INCORRECT statement(s)**

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

### Solution (b)

Zone II indeed has the lowest probability of experiencing strong earthquakes compared to other zones, hence statement 1 is correct. It covers areas with relatively stable geological formations. Considering the recorded history of earthquakes in the country, a total of ~59% of the land mass of India (covering all states of India) is prone to earthquakes of different intensities. As per the seismic zoning map of the country, the total area is classified into four seismic zones. Zone V is seismically the most active region, while zone II is the least.

Approximately, ~ 11% area of the country falls in zone V, ~18% in zone IV, ~ 30% in zone III and remaining in zone II.

Context: IIT-D develops India's first National Landslide Susceptibility Map

#### Question.4

The primary purpose of 'Sponge farming' which was recently in news is/are

- (a) Ornamental display
- (b) Pharmaceutical and cosmetic applications
- (c) Soil improvement
- (d) Biofuel production

#### Solution (b)

About Sponge farming

Sponge farming is an innovative agricultural practice that revolves around the controlled cultivation of marine sponges. Unlike traditional farming, sponge farming doesn't involve terrestrial crops or livestock; instead, it focuses on harnessing the unique properties of marine sponges, organisms belonging to the phylum Porifera.

Primary Purpose:

The primary purpose of sponge farming lies in the extraction of natural products with significant applications in pharmaceuticals and cosmetics. Marine sponges are abundant sources of bioactive compounds that possess unique chemical structures and properties. These compounds have caught the attention of researchers and industries for their potential therapeutic and cosmetic benefits.

Applications

**Pharmaceutical Applications:** Marine sponges produce bioactive molecules that exhibit intriguing medicinal properties. These compounds have shown potential in the development of new drugs, including those with anti-inflammatory, anti-cancer, and antimicrobial properties. Researchers are exploring the vast biochemical diversity of sponges to discover novel substances that could lead to breakthroughs in medicine.

**Cosmetic Applications:** The bioactive compounds derived from marine sponges are also sought after in the cosmetics industry. These compounds may

contribute to the formulation of skincare products with anti-aging, antioxidant, and moisturizing effects. The natural origin of these substances aligns with the growing consumer demand for sustainable and eco-friendly cosmetic ingredients.

Context: As oceans warm up, women in Zanzibar switch from seaweed to climate-resilient sponge farming to stay afloat

### Question.5

With reference to ‘Lagrange Points’ consider the following statements

1. They are five specific points in space where the gravitational forces of two orbiting bodies balance each other perfectly.
2. Lagrange Points L1, L2, and L3 lie along the line connecting the two orbiting bodies, while L4 and L5 are located at equilateral triangle points.
3. Lagrange Points L1, L2, and L3 are considered unstable equilibrium points whereas L4 and L5 are stable equilibrium points.

How many statement(s) given above are correct

- a) Only one
- b) Only two
- c) All three
- d) None

### Solution (b)

Lagrange points, named after the mathematician Joseph-Louis

Lagrange, are five fascinating points in space where the **gravitational pull** of two large objects, like the Sun and Earth, **cancel each other out**, hence statement 1 is correct. These points act as cosmic balancing acts, offering unique opportunities for scientific exploration and spacecraft positioning.

L4 & L5: These two points form equilateral triangles with the two large bodies at their vertices. Unlike the others, L4 and L5 are stably-balanced. Objects here experience a combination of gravitational pull and centrifugal force that keeps them “orbiting” around the system’s center of mass. This stability makes them natural homes for Trojan asteroids, a fascinating group of space rocks sharing



L4 and L5 with planets like Jupiter and Mars. Lagrange points depends on the mass ratio of the two objects. For L1, L2, and L3 to be stable, Unlike the others, L4 and L5 are stably-balanced, hence statement 3 is incorrect.

Context: The Indian Space Research Organisation (ISRO) has achieved a significant milestone by placing the Aditya-L1 spacecraft in a halo orbit around the Lagrangian point (L1).